

Michigan Department of Community Health Bureau of Laboratories
Changes to West Nile Virus Testing at MDCH in 2007.

Since West Nile virus (WNV) was first detected in 2001 Michigan, it has become endemic with cases occurring every year during a predictable season. Wider availability of testing for WNV, evolving arbovirus surveillance strategies and resource limitations have prompted the Michigan Department of Community Health Bureau of Laboratories (BOL) to revise WNV test menu and availability. For 2007 arbovirus testing resources will be directed toward detecting the most severe cases of neuro-invasive disease. Routine serum IgG testing of non-hospitalized patients with suspect WNV will not be available.

Cerebral spinal fluid samples will be tested for IgM antibodies to the four arboviruses most likely to be found in Michigan: WNV, St. Louis encephalitis virus (SLE), Eastern Equine encephalitis virus (EEE), and California Group virus (CGV) which includes LaCrosse virus. CSF IgM testing will be performed twice per week. Confirmatory Plaque Reduction Neutralization Test (PRNT) will also be performed on IgM positive CSF specimens to distinguish between flavivirus with cross-reacting antigens. Testing frequency may be adjusted depending on the availability of reagents and controls provided solely by the Center for Disease Control and Prevention.

Since many commercial and clinical reference laboratories now offer serum IgM and IgG WNV and other arbovirus testing with acceptable performance, limited public health resources must be directed to other public health priority testing. Therefore, IgG and IgM of **serum** specimens from non-hospitalized patients will not be available at MDCH. Serum testing for PRNT for hospitalized patients will be available only with prior approval of an MDCH epidemiologist. To request serum PRNT, phone the MDCH Bureau of Epidemiology at 517-335-8165.

The BOL appreciates the collaboration with our clinical colleagues that allowed public health to respond to WNV as it emerged as a threat in Michigan. Robust reporting by clinical laboratories has provided essential surveillance data to our Bureau of Epidemiology and CDC. The elimination of arbovirus IgG testing at MDCH will mean a greater dependence upon reporting of positive serum antibody tests by clinical laboratories and physicians. More than ever, your assistance in reporting positive test results is needed for arboviral surveillance. Please continue to report all positive arbovirus IgG and IgM results to your local health jurisdiction.

The BOL received a total of 765 cerebral spinal fluid and serum specimens for arbovirus testing in 2006 (compared to 922 for 2005). Testing identified 52 positive WNV specimens and 2 positive LaCrosse virus specimens. Blood collection donor screening identified 4 blood donors with WNV at the time of donation, resulting in a total of 55 laboratory reported cases of WNV illness in Michigan in 2006 including seven fatalities.

For questions regarding testing, please contact Dr. Anthony Muyombwe at 517-335-8099 or MuyombweA@Michigan.gov.